EFFECT OF MUSIC ENRICHMENT PROGRAMME ON PSYCHOLOGICAL WELL-BEING, MEMORY SKILLS & ABILITIES UNDERLYING DECODING DIFFERENCES OF MENTALLY CHALLENGED CHILDREN

A SUMMARY of the

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INTRODUCTION

The word mental retardation is used to refer to those persons with more than one problem which has tremendous effect on their learning ability (Nocera, 1979). Mental retardation refers to a condition in which a person's ability to learn and to function is more limited than others of the same age. During infancy and the toddler years, a child may be considered only a bit slow, although delays in development and in language and motor skills may be apparent. Mental retardation is not illness, disease. It's also not a kind of mental illness, like depression. There is no cure for mental retardation. However, most children with mental retardation can learn to do many things. It just takes them more time and effort than other children. Every child with mental retardation is able to learn, develop, and grow. With help, all children with mental retardation can live a satisfying life.

In general, mentally retarded children reach such developmental milestones as walking and talking much later than the children in the general population. Symptoms of mental retardation may appear at birth or later in childhood. The child's age at onset depends on the suspected of the disability. Based on standard scores of intelligence tests, present the categories of the mental retardation given by American Association of mental retardation, the diagnostic and statistical manual of mental disorders–IV - TR, and the international classification of diseases, the types of mental retardation is given in table 1.

Table 1: Type of Mental Retardation

S.No.	Type of Mental Retardation	I.Q.
1.	Profound Mental Retardation	Below 20
2.	Severe Mental Retardation	20-34
3.	Moderate Mental Retardation	35-49
4.	Mild Mental Retardation	50-69
5.	Borderline Intellectual Functioning	70-84

In the past, students with severe and/or multiple disabilities were regularly excluded from public schools. Since the implementation of Public Law 94-142, the Education of the Handicapped Act, now called the Individuals with Disabilities Education Act (IDEA), public schools now serve large numbers of students with severe and/or multiple

disabilities. Educational programming is likely to begin as early as infancy, where the primary focus is to increase the child's independence. In order to be effective, educational programs need to incorporate a variety of components to meet the extensive needs of individuals with severe and/or multiple disabilities. Programs should assess needs in four major areas to be most effective: domestic, leisure and recreation, community, and vocation. There are thousands of agencies around the world that provide assistance for people with developmental disabilities. They include state-run, for-profit, and non-profit, privately run agencies. Although there is no specific medication for mental retardation, many people with developmental disabilities have further medical complications and may take several medications. Music has been used therapeutically for people who have physical, emotional, social, or cognitive deficits, even those who are healthy can use music to relax, reduce stress, improve mood, or to accompany exercise. There are no potentially harmful or toxic effects. Music therapists help their patients achieve a number of goals through music, including improvement of communication, academic strengths, attention span, and motor skills. They may also assist with behavioral therapy and pain management. Music therapy is used to treat people for various reasons and there are multiple styles of treatment presently being used. Music therapy is an effective form of therapy that is used on people of all ages to improve quality of life. Music therapy has been used in the medical industry for more than 60 years and there are many people who have no idea what it is.

Therapeutic Characteristics of Music -

- Music captivates and maintains attention
- Music stimulates and utilizes many parts of the brain
- Music is easily adapted to, and can be reflective of, a person's abilities
- Music structures time in a way that we can understand that's the last verse - my exercise session is almost over

- Music provides a meaningful, enjoyable context for repetition
- Music provides a social context -- it sets up a safe, structured setting for verbal and nonverbal communication
- Music is an effective memory aid
- Music supports and encourages movement
- Music taps into memories and emotions
- Music and the silences within it provide nonverbal, immediate feedback
- Music is success-oriented - people of all ability levels can participate

Music has been successful as a therapeutic intervention for children with disabilities. It has been used with persons, of all ages from preschool to late adulthood and with many types of disabilities whether congenital or adventitious. Music therapy may play an important role in developing, maintaining and/or restoring physical functioning.

Because music is reinforcing, it can be used to motivate movements or structure exercises which are prescribed in physical rehabilitation. Involvement in music may provide a distraction from the pain discomfort, and anxiety often associated with some physical disabilities. Therapists use music therapy in a variety of ways, including having people sing along to the music, meditate and relax while music plays and conduct various exercises and movements with music as the catalyst. When played in conjunction with a person's thoughts or movements, music therapy can help to improve everything from a patient's speech to their memory and physical balance. It also provides emotional healing, helping people to develop positive self-image and aids in prioritizing stress and pain. Music also helps people take their mind off of physical pain, which can help them cope with a number of ailments.

In scientific lingo, the brain responds to the relaxing powers of music by moving from the beta state to alpha, then the theta state and finally to the delta state. These are the electrical activities of the brain that explain patterns like thinking, sleeping or relaxing. When the mind is tense, it's in beta activity. With music, the brain relaxes, sometimes to the delta state that is the highest level of relaxation. If the brain can stay in the relaxed state for longer periods, healing is much

faster. A very powerful influence on the human mind comes from the Vedic word Om, supposedly the sound of the divine. The chanting of this lone syllable is said to help control pulse and blood pressure, relieve stress, alter neurological states, controls the pituitary gland, hypothalamus, endocrine and the nervous system. If Om chanted in the Sahasrara Chakra (crown chakra), the problem of fits can be improved.

Some ragas like Darwari Kanhada, Kamaj and Pooriya are found to help in defusing mental tension, particularly in the case of hysterics. For those who suffer from hypertension, ragas such as Ahirbhairav, Pooriya and Todi are prescribed. To control anger and bring down the violence within, Carnatic ragas like Punnagavarali, Sahana etc. do come handy. The impact of ragas on mentally retarded (M R) children have noticed that it is the right combination of rhythms and tempo, which also affected the quality of a raga. Not only psychological impact, but also somatic or physiological impact of ragas has come to light in some recent works (Sairam.2004). For instance, stomach-related disorders are said to be cured with some Hindustani Ragas such as Deepak (acidity), Gunkali and Jaunpuri (constipation) and Malkauns or Hindolam (intestinal gas and for controlling fevers). Fevers like malaria are also said to be controlled by the ragas like Marva. For headaches, relaxing with the ragas like Durwari Kanada, Jayjaywanti and Sohni is said to be beneficial.

Research has shown that right side of the brain, which responds to creative arts, including music. Different genres of music have different effects on mind. Rock music, which has a series of repetitive notes, many high and low pitches and dense tone figures, requires an immediate adjustment from the mind to understand the different frequencies. A concerto or a classical raga has a structure, it takes you to a point and brings you back. Pop or rock tunes last not more than few minutes, how much can you relax in that time. It is a kind of fleeting from one state of consciousness or emotion to another.(need more citation)

According to lead investigator Dr Predrag Mitrovic (university of Belgrade) it has been found that music therapy have positive effects on heart by decreasing sympathetic nervous activity. Also it was found that positive emotion aroused by happy and joyful music can have favorable effects on heart and vascular endothelium. They have studied for seven years with a total of 740

patients among those half of the patients receiving two sessions of music therapy for twelve months daily and the other half not listening to music.

Those who listened to music had less anxiety, both systolic and diastolic pressure reduced and also the heart rate. They had less angina, less heart failure, and lower rate of re-infarction, lower rate of sudden death. Typically the classical music has been preferred but not all. The seven basic swaras (musical notes) of the musical octave have a one-to-one correspondence with these chakras (nuclei of subtle energy). The lower most (in the kava equina region along the erect endocrine column), viz., the Muladhara Chakra is associated with the swara "sa"; that means, the practice of chanting this particular musical note will have impact on awakening or activation of this particular chakra. Similarly, the chakrassuccessively upwards in this direction namely, the Swadhisthana, Manipura, Anahata, Vishuddha, Agya and the top-most Sahastrara Chakra… have correspondence respectively with the swaras "re", "ga" "ma", "pa", "dha" and "ni". Significantly, the order of the compositions of these swaras in the "aroha" (ascending) and "avaroha" (descending) patterns of the Shastric musical tunes also match with the top-down (from Sahastrara to Muladhara) and bottom-up (from Muladhara to Sahastrara) directions of the flow of energy. Music may also work as a therapy for mentally challenged children.

EMERGENCE OF THE PROBLEM

Music has played a vital role in our society. Everything from loud, head-banging concerts to religious ceremonies have utilized the medium of music because of its awe-inspiring qualities.

Music therapy is an established form of creative art therapy. By using music as a specific medium of communication and expression and adapting it to the individual resources and abilities of the patient, music therapy can be beneficial in activating and supporting mental and psycho-physical recovery. Music therapy has been recommended as an effective treatment in facilitating communication, as music is a medium that involves a complex range of expressive qualities, which some form of alternative communication can be established to help achieve engagement, interaction and relationships (Trevarthen 1999; Wigram 2002). Research by Gotell et al. (2009) illuminated caregiver singing and background music as improving the patient's

ability to express positive emotions and moods, and to elicit a sense of vitality on the part of the person with severe dementia (Gotell, Brown, & Ekman, 2009).

Music has a universal appeal and has a unique ability to bring people together. Music therapy is the use of sounds and music to support and encourage physical, mental, social and emotional well-being of disabled and ill people. Music therapy has an ability to stimulate both the right and left brain, simultaneously. A child suffering from disability, ranging from mental retardation, to physical disability to even children suffering from ADHD, music therapy may hold the key to improved health. With music and sound, we can create an atmosphere in which children are improved health. With music and sound, we can create an atmosphere in which children are captured by words, sounds, or both. Children with ADHD often find they are in state of calmness when listening to music. Music therapy often improves the self- image of disabled children.

Florian Eckl (2012) found that Music is important and positive for well-being in old age. The home environmental variables included parental behavior and attitude, psychosocial climate, demographic and structural characteristics of the families.

Given such effects music can have these arise research questions like; can music have effect on psychological well being and memory skills and of mentally challenged children? Does it help to developed the abilities underlying decoding differences of mentally challenged children? Researcher did not come across any study answering these question and hence researcher decided to shed scientifically credible light on this aspect with the justification as follow.

JUSTFICATION OF THE PROBLEM

Plato said: "music is a moral law. It gives soul to the universe, wings to the mind, flight to the imagination, and charm and gaiety to life and to everything." Unknown authors have written that "music is what feelings sound like" and that "you can dance anywhere, even if only in your own heart.

" Music as a therapeutic tool to treat a broad spectrum of conditions, including psychiatric disorders, medical problems, physical handicaps, sensory impairments, developmental disabilities, substance abuse, and age-related diagnoses such as Alzheimer’s and Parkinson’s

Disease. In South Africa (Benjamin 1983) the group consists of about 100 female patients sitting in a circle directed by a doctor. Music, through increasing tempo in singing and dancing, is used as an activator for the psychodrama techniques of Moreno (Moreno 1946). Music therapy is a psychotherapeutic treatment most commonly used to help children with developmental disabilities. Music as a therapy has been around longer than one might think and "recognized for centuries" (Bunt 179). Many years before that, music was used as a less scientific means of healing by medicine men (Hadley 215). By using music therapy directly, or indirectly, as a developmental aid, many people can be positively effected. When many people can use the treatment, it has to be available in many different locations.

Different research has shown that in the 18th century the great Austrian musician “Mozart” music is especially effective in treating the mental illnesses. Focusing on the role of music Wimpory, Chadwick, and Nash (1995) used musical interaction therapy in order to synchronize music to interactions between a 3 year old girl with autism and her mother. The girl showed improvements in eye contact and other forms of social acknowledgement, and she initiated more episodes of interactive involvement with her mother. Moreover, a two-year follow up showed that these benefits were sustained.

Now in present time mentally challenged is a universal phenomenon. It occurs, with varying degrees of frequency, in families from all walks of life in both developed and underdeveloped countries. In its most severe forms it is a source of great trauma, hardship, and despair to parents and is an economic and social burden to communities. Music therapy can play an important role in special education because many students with disabilities need special instructional treatment. Music is an ancient method for healing different types of diseases. It neutralizes negative feelings, increases stress tolerance level and harmonizes inner peace. The use of music therapy can help people who are suffering from crippled ,varies cognitive and bio psychosocial problems. It can also help to improve the quality of life for people with disabilities of various kinds. On the bases of all facts and need of special education for mentally challenged children researcher decided to conduct the present study.

STATEMENT OF THE PROBLEM

A study of effect of music enrichment programme on psychological well-being , memory skills & abilities underlying decoding differences of mentally challenged children.

DEFINITION OF THE TERMS USED IN PROBLEM

1. Music Enrichment Programme

Music enrichment programme is the programme introduced to the mentally challenged children in order to enhance their achievement it includes different songs based on academics, adjustment and level of Consciousness. Those to be learned by the mentally challenged children.

2 .Psychological Well-being

The feeling of happiness and satisfaction subjectively experienced by individuals has been termed as psychological wellbeing .

Okun and Stock (1987)

Operational Definition: For the present investigation psychological wellbeing happiness of mentally challenged children.

3. Memory Skills

Our ability to remember things. Being able to recall and use things we need in our life. Remembering how to do certain things like math techniques.

Memory is the process we use to store and recall information. There are two types of memory short-term or working memory and long-term memory. Short-term memory allows you to recall information for several seconds up to a minute. It is possible to store about seven items at a time in short term memory. Long-term memory allows you to store information for longer periods but not indefinitely.

Operational Definition: For the present investigation memory skills are ability to remember things related to short term memory for mentally challenged children.

4. Abilities Underlying Decoding Differences

Abilities underlying decoding differences between phonemic awareness. Phonemic awareness is awareness of the individual phonemes in words and other type speech strings.

Operational Definition: For the present investigation ability of decoding differences between demonstrate different sounds.

5. Mentally challenged children

According to the American Society of Mental Deficiency (Herber 1961)- Mentally challenged children are with some of mental retardation to sub – average general intellectual functioning which originate during the development period and is associated with impairment is adaptive behaviors.

OBJECTIVE OF THE STUDY

The objectives of the study were :-

1. To develop music enrichment programme for the mentally challenged children.
2. To orient mentally challenged children of experimental group the music enrichment programme.
3. To study the effect of music enrichment programme on Psychological well-being of mentally challenged children.
4. To study the effect of music enrichment programme on memory skills of mentally challenged children.
5. To study the effect of music enrichment programme on abilities underlying decoding differences of mentally challenged children.

HYPOTHESES OF THE STUDY

1. There is no significant effect of music enrichment programme on Psychological well-being of mentally challenged children.
2. There is no significant effect of music enrichment programme on memory skills of mentally challenged children.
3. There is no significant effect of music enrichment programme on abilities underlying decoding differences of mentally challenged children.

DELIMITATION OF THE STUDY

The present study was delimited to–

Mentally challenge school going children of Asha School Agra, Age group 5 to 15.

VARIABLES OF THE STUDY

1. Independent variable - Music enrichment programme.
2. Dependent variable - Psychological well-being , memory skills and abilities underlying decoding differences .

1. Control of Extraneous Variables

The extraneous variance is controlled by identification of effective caravels and using effective strategy of control. The subject relevant variables, situation relevant variables and sequence relevant variables as described by D'Amato (1970) have been controlled through various types of control techniques, as under:

Table 2: Control and Extraneous Variables

EXTRANEOUS VARIABLES	**TECHNIQUE OF CONTROL**
A. Subject Relevant Variable	
1. Age	Constancy (5 to15)
2. Sex	Randomization
3. Caste	Randomization
4. Religion	
5. Occupation	
B. Situation Relevant Variable	
1. Temperature	Constancy
2. Humidity	Constancy
3. Noise	Elimination
4. Lightning level	Constancy
5. Time of the study	Constancy
6. Culture	Constancy
7. Institutional difference	Constancy
8. Socioeconomic status	Randomization
C. Sequence Relevant Variable	
1. Practice	Elimination
2. Fatigue	Elimination
3. Monotony	Elimination

METHODOLOGY OF THE STUDY

The method of the study can be stated in the following heads.

Design of the Study

Quasi experimental pre-test, post-test design was used.

Sample of the Study

A sample of 40 mentally challenged children (20 Experimental, 20 Control) of age group above 5 to below 15 were randomly selected.

Tools

The following tools were used by researcher in order to collect data:-

Self constructed Psychological Well Being scale

Self-constructed - Self constructed memory Test

Self constructed abilities underlying decoding differences scale

Statistical Techniques

Statistical Mean, SD, Mann-Whitney U- test, Wilcoxon Signed Ranks Test (Z–Test) and graphical representation were used for the analysis of data.

FINDINGS OF THE STUDY

Findings of the study are presented according to the objectives as follows-

1) Effect of music enrichment programme on psychological well-being of mentally challenged children.
2) Effect of music enrichment programme on memory skills of mentally challenged children.
3) Effect of music enrichment programme on abilities underlying decoding differences of mentally challenged children.

(1) Effect of music enrichment programme on Psychological Well-being of mentally challenged children.

a) At pre-test the mean scores of psychological well-being of mentally challenged children were found to be M = 80.8 and M =85.5 for experimental and active control group respectively.

At post-test the mean scores of psychological well-being of mentally challenged children (experimental and active control group) were found to be M = 110.1and M = 92.15 respectively.

b) The mean score (M = 80.8) of psychological well-being of active control group was found to be greater than experimental group (M = 85.5) at pre-test. These values represent the individual differences in two groups. It shows that active control group had higher scores in psychological well-being in comparison to experimental group. The mean score (M =110.1) of psychological well-being of experimental group was greater than active control group (M =92.15) in post-test. These values reveal that psychological well-being of experimental group was greater than active control group in post-test. The mean score (M = 80.8) of pre-test of psychological well-being of experimental group was lesser than post-test score of psychological well-being of experimental group (M = 110.1). Mean score (M = 85.5) of pre-test of psychological well-being of active control group was more than post-test score of psychological well-being of active control group (M = 92.15).

c) Standard deviation (SD =12.6) of experimental group was greater than standard deviation (SD =9.3) of active control group in pre-test. It shows that variability of experimental group was greater than active control group. Standard deviation of active control group (SD = 8.45) was more than standard deviation (SD =8.36) of experimental group at post- test. Standard deviation (SD = 8.45) at post-test of experimental group was lesser than standard deviation (SD =12.6) at pre -test of experimental group. It represents that variability of experimental group in post-test was less. Standard deviation (SD =8.36) at post-test of active control group was less than standard deviation (SD =9.3) at pre- test of active control group. It represents that variability of active control group at pre-test and post- test was almost same.

(2) The effect of music enrichment programme on Memory Skills of mentally challenged children.

a) At pre-test the mean scores of memory skills of mentally challenged children (experimental and active control group) were found to be M = 8.57and M =9.26 respectively. At post-test the mean scores of memory skills of mentally challenged children (experimental and active control

group) were found to be M = 20.3 and M = 12.58 respectively.

b) Mean of three dimensions of active control group (M =9.26) was almost same as experimental group (M =8.57) at pre-test. Mean scores of three dimensions of experimental group was (M =20.3) higher than active control group (M = 12.58) at post- test. It represents that the memory skills of experimental group was more than active control group. The mean score (M =8.57) at pre-test of three dimension of memory skills of experimental group was lesser than post-test score of three dimension of memory skills of experimental group (M =20.3). It reveals that pre-test scores of experimental group was lesser than post-test score of three dimension of memory skills of experimental group. Mean score (M =9.26) at pre-test of three dimension of memory skills of active control group was lesser than post-test score of three dimension of memory skills of active control group (M = 12.58). It reveals that three dimension of memory skills of pre-test of active control group was lesser than post-test score of three dimension of memory skills of active control group.

c) Standard deviation of experimental group was (SD =3.09) found to be more than active control group (SD =1.66) at pre-test. It shows that the variability of experimental group was higher than active control group. Standard deviation of active control group was (SD = 2.26) almost same as experimental group (SD = 2.07) at post-test. It shows that the variability of active control group was higher than experimental group. Standard deviation (SD =3.09) at pre-test of experimental group was greater than standard deviation (SD =2.07) at post-test of experimental group. It represents that variability of experimental group at post-test was more. Standard deviation (SD =1.66) at pre-test of active control group was lesser than standard deviation (SD =2.26) at post-test of active control group. It represents that variability of active control group at post-test was more than standard deviation of pre-test.

(3) The effect of music enrichment programme on Abilities Underlying Decoding Differences of mentally challenged children.

a) At pre-test the mean scores of abilities underlying decoding differences of mentally challenged children (experimental and active control group) were found to be M = 8.42 and M = 10.16 respectively. At post-test the mean scores of abilities underlying decoding differences of

mentally challenged children (experimental and active control group) were found to be M = 18.7 and M = 12.01 respectively.

b) Mean of three dimensions of active control group (M =10.16) was higher than experimental group (M =8.42) at pre-test. Mean scores of three dimensions of experimental group was (M = 18.7) higher than active control group (M = 12.01) at post- test. It represents that the abilities underlying decoding differences of experimental group was more than active control group. The mean score (M = 8.42) at pre-test of three dimension of abilities underlying decoding differences of experimental group was lesser than post-test score of three dimension of abilities underlying decoding differences of experimental group (M = 18.7). It reveals that of pre-test of experimental group was lesser than post-test score of three dimension of abilities underlying decoding differences of experimental group. Mean score (M =10.16) at pre-test of three dimension of abilities underlying decoding differences of active control group was lesser than post-test score of three dimension abilities underlying decoding differences of active control group (M = 12.01). It reveals that three dimension of abilities underlying decoding differences of pre-test of active control group was lesser than post-test score of three dimension of abilities underlying decoding differences of active control group.

c) Standard deviation of experimental group was (SD =1.97) found to be more than active control group (SD = 1.48) at pre-test. It shows that the variability of experimental group was higher than active control group. Standard deviation of active control group was (SD = 2.37) more than experimental group (SD =1.21) at post-test. It shows that the variability of active control group was higher than experimental group. Standard deviation (SD = 1.97) at pre-test of experimental group was lesser than standard deviation (SD =1.21) of post-test of experimental group. It represents that variability of experimental group in post-test was more. Standard deviation of (SD = 1.84) at pre-test of active control group was lesser than standard deviation (SD = 2.37) at post-test of active control group. It represents that variability of active control group in post-test was more than standard deviation of pre-test.

The significant of difference of scores was tested by hypotheses testing.

TESTING OF HYPOTHESES

In line with the objectives of the study following hypotheses were tested-

1. There is no significant effect of music enrichment programme on the Psychological Well-being of mentally challenged children.

The value of Mann-Whitney U-test ($U = 162$, $p > 0.05$) indicates that there was no statistically significant difference between scores of psychological well-being of two groups of mentally challenged children at pre-test. This implies that there was no baseline difference in psychological well-being at pre-test. The results of Wilcoxon signed Rank test ($Z= 3.92$, $p < 0.05$) for pre and post-test of psychological wellbeing shows that there is significant difference between scores of pre and post-test of psychological wellbeing of experimental group of mentally challenged children . The results of Wilcoxon Rank test ($Z=0.34$, $p < 0.05$) at pre and post-test scores of active control group shows that there is no significant difference between scores of psychological wellbeing psychological wellbeing of pre and post-test of active control group of mentally challenged children. This reveals that psychological well-being of experimental group was better at post-test. It reveals that music enrichment programme is effective for improvement in the psychological well-being of mentally challenged children. This inference has been supported by Clift & Hancox (2001) Positive benefits associated with choral singing served to find out four categories of significant personal and health challenges. They also findout six 'generative mechanisms' by which singing may impact on wellbeing and health. The healing force of music has been known since ancient times and studies showed the positive and beneficial impact of music on mental health problems**.** (Demirbatir, Helvaci, Yilmaz, Gul, Senol, Bilgel ,2013).

Hence the hypotheses that there is no significant effect of music enrichment programme on the psychological well-being of mentally challenged children has been rejected.

2. There is no significant effect of music enrichment programme on Memory Skills of mentally challenged children.

The results of Mann-Whitney U-test ($U = 141.5$, $p > 0.05$) for memory skills indicate that there was no significant difference between scores of memory skills of two groups of mentally

challenged children in pre-test. Thus there was no difference in memory skills of experimental and active control group. The value of Mann-Whitney coefficient ($U = 5$, $p < 0.05$) indicates that there was significant difference between scores of memory skills of two groups. This shows that experimental group was better in memory skills than active control group at post-test.

The results of Wilcoxon signed Rank test ($Z = 3.93$, $p < 0.05$) for pre and post-test of three dimensions of memory skills shows that there is significant difference between scores of pre and post-test of three dimensions of memory skills of experimental group of mentally challenged children. This reveals that three dimensions of memory skills of experimental group is enhanced at post-test. The results of Wilcoxon signed Rank test ($Z = 0.90$, $p < 0.05$) of pre and post-test scores of active control group shows that there is no significant difference between scores of three dimensions of memory skills of pre and post-test of active control group of mentally challenged children.

It shows that music enrichment programme helps in for good memory skills of mentally challenged children. These result are also supported by research on western music indicates that musical training (Chan 1998; Ho 2003; Franklin, 2008) and also simple exposure to music leads to benefits on short- and long-term verbal memory in healthy and clinical populations (Balch., 1992; Balch and Lewis, 1996).

Hence the hypotheses that there is no significant effect of music enrichment programme on the memory skills of mentally challenged children has been rejected.

3. There is no significant effect of music enrichment programme on Abilities Underlying Decoding Differences of mentally challenged children

The results of Mann-Whitney U-test ($U = 141$, $p > 0.05$) showed no significant difference between pre-test scores of abilities underlying decoding differences of experimental and active control group. The values of Mann-Whitney U-test ($U = 1.5$, $p < 0.05$) indicate that there was significant difference between scores of abilities underlying decoding differences of two groups of mentally challenged children. This shows that experimental group was having higher abilities underlying decoding differences than active control group at post test.

The results of Wilcoxon signed Rank test (Z= 3.94 , p < 0.05) for pre and post-test of different sounds of picture shows that there is significant difference between scores at pre and post-test of different sounds of picture of experimental group of mentally challenged children. This reveals that different sounds of picture of experimental group is enhanced at post-test. The results of Wilcoxon signed Rank test (Z=1.07 , p < 0.05) of pre and post-test scores of active control group shows that there is no significant difference between scores of different sounds of picture at pre and post-test of active control group of mentally challenged children .

These results are supported by various researches; Rautenberg (2013) investigated that the special musical training had a significant effect on reading accuracy in word reading, as analysis of covariance revealed.

Hence the hypotheses that there is no significant effect of music enrichment programme on level of consciousness of mentally challenged children has been rejected.

EDUCATIONAL IMPLICATIONS OF THE STUDY

Mentally challenged is a functional interaction between an individual and the environment where s/he lives in rather than a static description which is rooted in an individual's limits. Mentally challenged children face an increased number of failure experiences compared to normal children and they feel more difficulties in their life because they have to make more efforts to complete the same work as a student in a common classroom. The inability to complete a task creates frustration and embarrassment particularly if mentally challenged children have poor psychological wellbeing, poor memory and poor abilities underlying decoding differences. So an enrichment programme is important for educating the mentally challenged children beginning with the orientation of mentally challenged children with the music enrichment programmes. The development of the individual education programme, collaboration among special , integrated and inclusive class teachers, parents resources, teachers, regular teacher educational organizations, administration, curriculum planner, guidance workers, counselors ,voluntary organizations and teacher special teams, special training institutions are required for educating mentally challenged children. According to the above results, it can be said that rhythmically physical activities, a powerful therapeutic

intervention (mediator), have a high potentiality to improve the memory and attention in mentally retarded children who are teachable and as they are accompanied by music and song, they are more exciting and attractive to the mentioned children. So, they can simply be included in educational and rehabilitation programs. They are important because they informally affect the quality of these children and promote the memory and attention which are the underlying assumption of learning process. It seems that the use of rhythmically physical activities is a new way of the early mediators in developing mentally disabled children's skills in such a way that it can impact on cognitive, behavioral, emotional- affective skills. As an implication, therefore, it is better to investigate the effect of rhythmically physical games in pre-elementary levels.

The results of the present investigation will be of great help to educational planners & policy makers particularly of special, integrated and inclusive education. They may support special music programmes as part of their curriculum .The findings of the study reveal that there is positive significant effect of music enrichment programme on psychological wellbeing, memory skills and abilities underlying decoding differences of mentally challenged children. The results of the study may also be significant for teachers of mentally challenged children so that they may give proper emphases on integration of music in their class rooms. The results may be of great help to the administrators, managers and supervisors of mentally challenged children so that they may provide proper facilities for teaching and learning of music in their schools. It will help mentally challenged children with poor psychological wellbeing and those who have poor memory . Knowledge about effect of music enrichment programme on psychological wellbeing, memory skills and abilities underlying decoding differences of mentally challenged children can be used to design the appropriate and effective educational programmes. The suggestions that emerge for teachers, parents and curriculum planners are as follow.

SUGGESTIONS FOR TEACHERS OF MENTALLY CHALLENGED CHILDREN

Teachers need expertise to improve psychological well-being, memory skills and abilities underlying decoding differences of mentally challenged children. They need to know to observe, manage and help mentally challenged children with the different problems of

psychological well-being, memory skills and abilities underlying decoding differences.

Special education teachers have used music to alter mood and assess emotional problems. Music allows the individual to invent emotions. Music is viewed as an integral part of all children's lives. Children enjoy listening to music, singing, and humming. Music may effectively enhance the ability to cope with stress. It was found that integrating content with musical concepts helped to bring books alive and that musical classrooms encouraged children to relate and participate in the activities (Giles, Cogan, & Cox, 1991).

Music is organized reality, real event that occur in the minds and demands the moments a person is attentive. Music can provide expressive tool and boost a valuable of feelings (Sears, 1968) . Regarding the very high impact of appropriate music on children's performance and that the easiest method is the use of music for teaching children in all activities (Shryntvn, 2009) It seems that according to research conducted on psychological and social characteristics of Iranian children based on effects of music and allowed the children to be able to upgrade the performance level of their ability to be effective and useful by music(Carroll, 2009).who had carried out research work on the mentally challenged students had found similar effects on them with the help of integration of music in education . Thus, the following suggestions emerge for teachers:

- Teachers are suggested to understand the value of music programmes for the education of mentally challenged children.
- Teachers are suggested to include music in their regular teaching-learning.
- Teachers are suggested to convince the authorities of mentally challenged school include different type's music in school curriculum.
- Teachers are further suggested to use music therapy for solving various psychological well-being, memory skills and abilities underlying decoding differences related problem of mentally challenged children.
- Teachers are suggested to give regular guidance to parents for providing exposure to various music programme at home.

SUGGESTIONS FOR PARENTS OF MENTALLY CHALLENGED CHILDREN

The parents play a vital role in the emotional and intellectual development of mentally challenged children. Parents of mentally challenged children have more responsibilities than normal children's parents. Parents devote more time and effort to increase the psychological well-being, memory skills and abilities underlying decoding differences.

Effective integration of music in the content areas creates a learning environment that makes all Children want to learn. Collett (1992) reported a successful music integrated curriculum which works well with bilingual and special education students. Music integration provide children with concrete, hands-on experiences that are essential to developing each child's ability to reason, think, solve problems, analyze, evaluate, and to enhancing creativity (Houchens, 1983). Music is viewed as an integral part of all children's lives. Children enjoy listening to music, singing, and humming. Music may effectively enhance the ability to cope with stress.

Following suggestions emerge for parents:

- Parents are advised to use music programme for better psychological well-being, memory skills and abilities underlying decoding differences of their children.
- Parents are suggested to make their children learn some vocal or instrumental music.
- Parents are also suggested to keep the enviournment in their home filled be soft music.

SUGGESTIONS FOR EDUCATIONAL STAKE HOLDERS

Educational Stakeholders also play a crucial and formative role in the spheres of cognitive, language, emotional, social and moral development of mentally challenged children. Music is becoming increasingly associated with special education and inclusive education, particularly with the education of students with severe disabilities. It is seen as a desirable component of education by some parents of students with disabilities (Fidler, Lawson, & Hodapp, 2003). Music is more than a leisure activity. It is more than verbal counseling It is like a therapy. It is a sophisticated cognitive, linguistic, social and psychological treatment. Music provides a form of compensation for those with language impairments as well as a means of facilitating language development. Music therapy is seen by music therapists as a useful contribution to the education of students with special education needs (Aldridge, Gustorff, & Neugebauer, 1995; Daveson & Edwards, 1998; Patterson, 2003). Music focuses on accuracy and attention. Learning how to

play an instrument can improve attention, concentration, impulse control, social functioning, self-esteem, self-expression, motor skills , motivation and memory. Therefore

- Educational Stakeholders should organize the activities in the school in a manner that takes into account the personality structure of mentally challenged children and their problems and capabilities.
- Planning of school time- table curriculum design, co-curricular and extracurricular activities should take in to account music as an important component.
- Music education should be emphasized at school level and at regular bases.
- Modified curriculum suited to the personality needs of mentally challenged children may be planned incorporating music enrichment programs.

SUGGESTIONS FOR FURTHER RESEARCHES

On the basis of the findings and limitations of the study ,the suggestions for further researches are in this area are as follow.

- A similar study can be carried out to get better and more authentic results on a larger sample to get more authentic results.
- A comparative study can be undertaken find out the effect of moderate and mild mentally challenged children.
- A survey can be carried out to study the educational facilities provided to mentally challenged children in relation to their psychological well-being, memory skills and abilities underlying decoding differences .
- A research could be carried out the role of music enrichment programme on rehabilitation programme of mentally challenged children.
- Effect of music enrichment programme on Communication of Autism Spectrum Disorder Children can be studied and other related variables.
- Effect of music enrichment programme on social maturity of mentally challenged children can be studied and other related variables.
- The methodology of teaching mentally challenged children in our country can be

analyzed and compared with teaching practices used in other countries. Suggestion can be solicited and modification could be made in the existing method prevalent.

- Effect of music enrichment programme on Motor Skills of Cerebral Palsy Children can be studied and other related variables.

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